

## **Appendix A: Environmental Projects**

In compliance with and in addition to the requirements in Section VI (Environmental Projects) of the Consent Decree in United States of America, State of Maryland, and Robert G. Burnley, Director, Commonwealth of Virginia Department of Environmental Quality v. Mirant Potomac River, LLC and Mirant Mid-Atlantic, LLC, Mirant shall comply with the requirements of this Appendix to reduce emissions of particulate matter and/or fugitive dust from that facility.

### **I. Environmental Projects**

#### **1. Bottom Ash and Fly Ash Silo Vent Secondary Filtration**

- a. Within 90 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the installation of two secondary filtration systems (i.e., baghouse dust collectors and associated equipment) at the Potomac River Plant, as described herein.
- b. Ash from the Potomac River Plant's operations is transported pneumatically from the five units to three ash silos. Once in the silos, ash drops out and the transport air is vented out the top of the silo, through a baghouse dust collector. In this Project, Mirant shall install ductwork from the outlet of each ash silo vent down to ground level. Mirant shall also combine the vents from the two adjacent fly ash silos into one duct. In addition, Mirant shall install two secondary baghouse dust collectors and associated equipment at the outlet of the ducts at ground level.
- c. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 30 tons per year.
- d. Mirant estimates it will spend \$140,000 in implementing this Project.
- e. Mirant shall complete this Project and place the secondary filtration system in service by the later of September 1, 2005 or 7 months after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

#### **2. Coal Pile Wind Erosion and Dust Suppression**

- a. Within 30 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the implementation of fencing to control coal pile wind erosion and coal dust dispersion, as described herein.
- b. Mirant shall install a 12' high perimeter fence with windscreens on the windward and leeward sides of the coal storage pile to reduce wind erosion. The fencing shall be installed on top of existing concrete walls, which form the boundary of the coal pile. The fencing shall also be engineered to handle area wind loads, and be designed to avoid the effects of eddying and dust carryover.
- c. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 2.8 tons per year.



- c. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 200 pounds per year.
- d. Mirant estimates it will spend \$280,000 in implementing this Project.
- e. Mirant shall complete this Project and place the facility in service by the later of June 1, 2006 or 17 months after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

5. Ash Loading System Dust Suppression

- a. Within 90 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the installation of a water fogging system to improve dust suppression in the ash loading process, as described herein.
- b. In addition to the Ash Loader Upgrade Project described in Paragraph 6, Mirant shall install a water fogging system at the transfer points between the ash loaders and trucks, for additional dust suppression. Mirant shall also install a system of water pumps, piping, nozzles, and a control system to form a "fog" around the ash loader discharge chute. The water droplets shall drop fugitive ash particles to the ground, drain into a collection sump, and be treated at the Plant's water treatment facility.
- c. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 200 pounds per year.
- d. Mirant estimates it will spend \$85,000 in implementing this Project.
- e. Mirant shall complete this Project and place the fogging system in service by the later of June 1, 2005 or 5 months after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

6. Coal Railcar Unloading Dust Suppression

- a. Within 90 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the use of a chemical binding agent in conjunction with the railcar unloading process, as described herein.
- b. The railcar unloader is a device that empties individual railcars filled with coal onto conveyor belts, prior to the conveyance of the coal to the plant, by tipping the railcar upside down. To supplement the existing dust controls at this location, Mirant shall spray a dilute mixture of water and binding agent onto the coal at three locations during the unloading process. The three spray levels shall be activated in sequence as each railcar is tipped over.
- c. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 200 pounds per year.



- d. Mirant estimates it will spend \$75,000 in implementing this Project.
- e. Mirant shall complete this Project and place the facility in service by the later of April 1, 2005 or 3 months after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

3. Coal Stackout Conveyor Dust Suppression

- a. Within 30 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the use of a chemical binding agent on the conveyor system to control coal dust dispersion at this location, as described herein.
- b. Coal delivered to the Potomac River Plant is either transported from a railcar unloader to the plant via a series of conveyor belts, or conveyed to a storage pile outside the plant. At the time of lodging of this Decree, a set of nozzles spray water at the end of the conveyor that drops coal onto the storage pile to suppress fugitive dust emissions. Once this Project is implemented, Mirant shall spray a chemical binding agent onto coal as it drops onto the belt. The binding agent shall be a non-hazardous chemical that agglomerates fine coal particles together prior to being dropped onto the pile, thereby preventing wind from causing the fine particles to escape. The binding agent shall remain effective for a month or more on the coal in the pile, even with rain or when coal is moved around the pile.
- c. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 800 pounds per year.
- d. Mirant estimates it will spend \$112,000 in implementing this Project.
- e. Mirant shall complete this Project and place the facility in service by the later of December 1, 2004 or 30 days after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

4. Ash Loader Upgrade

- a. Within 90 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the installation of modern ash loading equipment at the Potomac River Plant, as described herein.
- b. Ash is transferred from storage silos to trucks by a gravity-feed system, in which ash-loading equipment regulates the flow of ash out of the silo above, then mixes it with water prior to dropping the dampened ash into a truck below. Fugitive ash dust emissions at this location are correlated to the extent to which the loader mixes water into the flowing ash. There are three ash silos, two of which have had modern ash loader equipment installed (in 1997 and 2001), and one that has the original equipment. Mirant shall replace the ash loading equipment on the third silo with the modern design which is much more effective at mixing water into the ash, further reducing fugitive dust emissions associated with this process.



- d. Mirant estimates it will spend \$250,000 in implementing this Project.
- e. Mirant shall complete this Project and place the facility in service by the later of June 1, 2006 or 17 months after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

7. Settled Dust Study

- a. Within 60 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide objectives and parameters for the implementation of a study of fugitive dust emission sources around the Potomac River Plant, along with associated impacts on ambient air quality, as described herein.
- b. On a daily basis, Mirant shall place acetate sheets in stands at multiple sites on the property near dust sources. At the conclusion of each day, Mirant shall collect these sheets and analyze them for dust accumulation. Mirant shall also record wind speed and direction data on a daily basis. Mirant shall retain a qualified consultant to correlate the meteorological data with the collected dust accumulation information to determine frequency and severity of dust transport at the Plant site. Mirant shall submit a report to the Plaintiffs at the conclusion of the study, summarizing the data collected and any conclusions or inferences drawn therefrom, including those regarding impacts on ambient air quality. Mirant shall also make such report available to the public upon request.
- c. Mirant estimates it will spend \$100,000 to complete this Study.
- d. Mirant shall commence this Study by the later of November 1, 2004 or 30 days after the Plaintiffs' approval of Mirant's timely submitted proposed plan, and shall complete the study and submit the final report by no later than 180 days after such date.

8. Truck Washing Facility

- a. Upon entry of this Consent Decree, Mirant shall commence operation of a temporary Truck Washing Facility at the Potomac River Plant designed to reduce fugitive dust emissions.
- b. Within 90 days after entry of the Consent Decree, Mirant shall submit a proposed plan for this Project to the Plaintiffs for review and approval. The proposed plan shall provide specifications for the installation of a permanent Truck Washing Facility at the Potomac River Plant, as described herein.
- c. A permanent truck washing facility shall be installed at the Potomac River Plant to wash the wheels, under-carriage, and sides of trucks used to haul fly ash and bottom ash to off-site ash storage facilities. The facility shall consist of a steel basin with ramps on either end, and an array of nozzles that spray high velocity jets of water on the bottom and sides of trucks as they are driven through the device. Water shall be recirculated through a filtration tank. Two pumps shall move water through the system, one to supply water to the spray nozzles, and one to draw water out of the basin and through the filtration tank. Accumulated solids

in the filtration tank shall be removed periodically, transported off site, and disposed of in accordance with all applicable local, state, and federal laws and regulations.

- d. At the time of lodging of this Decree, Mirant estimates that this Project may reduce fugitive dust emissions at the Potomac River Plant by as many as 13.7 tons per year.
- e. Mirant estimates it will spend \$100,000 in implementing this Project.
- f. Mirant shall complete this Project and place the facility in service by the later of July 1, 2005 or 5 months after the Plaintiffs' approval of Mirant's timely submitted proposed plan for this Project.

9. Virginia Clean Air Partners Project

- a. Within ninety (90) days after entry of this Consent Decree, and as part of the consideration provided to Virginia for its resolution of claims under this Consent Decree, Mirant shall provide funding to Clean Air Partners, an organization administered through the Metropolitan Washington Council of Governments, to support the development of an education campaign focused on "particle pollution" (PM). The primary function of the campaign shall be the development of a formal educational curriculum, training, and outreach to affected members of the community in the Northern Virginia area. The educational materials developed shall focus on the health effects of exposure to PM emissions, the causes and sources of PM emissions, and methods for protecting against health impacts and for reducing individual contributions to air pollution in the Washington region.
- b. Mirant estimates it will spend \$30,000 to fund this public outreach program.